'BRS VEREDA': NEW COMMON BEAN CULTIVAR FROM "ROSINHA" COMERCIAL GRAIN TYPE

Luis Cláudio de Faria[1], Maria José Del Peloso[1], Joaquim Geraldo Cáprio da Costa[1], Carlos Agustín Rava[1], Geraldo Estevam de Souza Carneiro[2], Dino Magalhães Soares[1], José Luiz Cabrera Díaz[1], Heloisa Torres da Silva[1], Aloisio Sartorato[1], Josias Correa de Faria[1] and Francisco José Pfeilsticker Zimmermann[1]

[1]Embrapa Arroz e Feijão, Caixa Postal 179, 75375-000 Santo Antônio de Goiás, GO, Brazil
[2]Embrapa Soja, Caixa Postal 231, 86001-970 Londrina, PR, Brazil

Brazilian bean production suffered significant impact as affected by strong social and economic changes during the last years. This situation suggests that individuals involved in the bean production chain should look for alternatives to better fit consumer demands, signaling plant breeders with the possibility to seek differentiated bean cultivars. On this purpose, Embrapa Rice and Beans releases BRS Vereda, of the "rosinha" (pink) grain type, differing from the traditional black and carioca commercial classes with the objective to supply regional market demands as well as broadening the consumer alternative choices.

BRS Vereda was originated from a multiple cross (HI 822510/CB 733743//LM 30013/Rosinha G2RMC), performed at Embrapa Rice and Beans The bulk method was used in F_2 and F_3 generations. In F_4, after inoculation with the pathotype 89 of *Colletotrichum lindemurhianum*, modified mass selection was performed and susceptible plants were eliminated. One pod per plant was collected from the remaining resistant plants to reconstitute the population. In the F_5 generation the same selection procedure was used, but the plants were harvested individually originating the F_6 families from where the LM 93203304 line was selected based on grain yield and erect plant type. In 1995 this line was assessed together with additional 24 lines and three controls in the National Trial, conducted under nine environments, in the States of Goias (4), Mato Grosso (2), Minas Gerais (2) and Espirito Santo (1). The joint analysis of the grain yield data and other agronomic characteristics provided the elements to promote LM 93203304 to the Regional Trial during the 1997/98 crop season. This time, LM 93203304 was assessed with eight additional lines and four controls in a randomized complete block design with four replications in 28 environments in the States of Goias (11), Federal District (2), Minas Gerais (7) and Mato Grosso do Sul (8) with average grain yield 11.2% superior than the controls (Table 1).

Table 1. Yield of BRS Vereda compared to the mean of control cultivars in the years 1997/1998.

Region	State	BRS Vereda (kg/ha)	Mean for controls (kg/ha)	Relative yield (%)	Number of sites
Southeast	Minas Gerais	2545	2259	112.7	7
Center West	Goias/Federal District	2746	2408	114.0	13
	Mato Grosso do Sul	1648	1662	99.2	8
Mean	-	2397	2156	111.2	

[1]Controls: Rosinha G2 and Roxo 90.

Based on these data it was released in 2002 with the trade name of BRS Vereda, for the States of Goias/Federal District, Mato Grosso do Sul and Minas Gerais. Even though grain yield in Mato Grosso de Sul had been 0.8% less than the controls, disease resistance and superior grain quality provided basis for cultivar indication for this State.

BRS Vereda has uniform grain size and color, average 100 grain mass of 26.3 g, excellent cooking quality and good grain appearance after cooked (Table 2).

Table 2. Technological and industrial quality of seeds from the cultivar BRS Vereda.

Cultivar	Cooking time (minutes)	Soluble solids (%)	Protein (%)	Whole grain (%)
BRS Vereda	27.0	10.8	22.8	95

Under artificial inoculation, BRS Vereda showed resistant reaction to common mosaic virus and to the following *C. lindemuthianum* pathotypes: 89, 585 and 95. In the field trials, it showed resistant reaction to rust, intermediate resistance to angular leaf spot and susceptibility to common bacterial blight.

BRS Vereda presents semi-erect plant type in any crop system and under a variety of soil and climate conditions where it was evaluated. It also presented good lodging resistance throughout its cycle of 93 days, in average, from emergence to physiological maturity.

Due to its superior yield potential and differentiated grain type, associated to excellent cooking performance, semi-erect plant type, resistance to lodging and to major diseases, is an interesting option for producers involved with specialty grain type production, providing a value added commodity for commercialization in the States of Goias/Federal District, Mato Grosso do Sul and Minas Gerais.

Genetic seed stocks are maintained by Embrapa Rice and Beans and basic seed is available at Embrapa Technology Transfer.

Institutions of participating scientists:

Embrapa Arroz e Feijão; Embrapa Milho e Sorgo; Embrapa Cerrados; Embrapa Transferência de Tecnologia/Escritório de Negócios de Sete Lagoas-MG; Embrapa Transferência de Tecnologia/Escritório de Negócios de Goiânia-GO; Empaer-MS; Agenciarural-GO; Universidade Federal de Viçosa; Universidade Federal de Lavras; Coopertinga; Fesurv/Esucarv.

References:

Faria, L.C. de; Del Peloso, M.J.; Costa, J.G.C. da; Rava, C.A.; Carneiro, G.E.S.; Soares, D.M.; Diáz, J.L.C.; Sartorato, A.; Faria, J.C. de. BRS Vereda: nova cultivar de feijoeiro comum do grupo comercial rosinha. Goiânia, Embrapa Arroz e Feijão. (Comunicado Técnico, 50).